Trip Report
2001 Annual Inspection of the
Parkersburg, West Virginia,
Nuclear Waste Policy Act Section 151(c) Disposal Site

Summary

The Parkersburg, West Virginia, site was inspected on November 2, 2001. Overall, the site was in good condition. The condition of the perimeter fence remains acceptable but because of severe rusting the fabric may require replacement within the next five years. Thistle appears to be spreading at the site and control measures should be continued. As first observed in 2000, one boundary monument could not be located. Inspectors placed adhesive decals on all perimeter signs to correctly identify the materials within the disposal cell. All site surveillance features were photographed during this inspection to document site conditions. No requirements for a follow-up inspection, additional maintenance, or monitoring were identified.

1.0 Introduction

This report presents the results of the annual U.S. Department of Energy (DOE) inspection of the Nuclear Waste Policy Act (NWPA) Section 151(c) disposal site at Parkersburg, West Virginia.

M. J. Gardner (Chief Inspector), and T. Franzone (Assistant Inspector), both of MACTEC-ERS, the Technical Assistance and Remediation contractor at the DOE Grand Junction Office (GJO), conducted the inspection on November 2, 2001. The inspection was conducted in accordance with the *Long-Term Surveillance Plan* [LTSP] *for the Parkersburg, West Virginia, Disposal Site* (DOE-GJO, September 1995).

The purposes of the annual inspection were to confirm the integrity of visible features at the site, to identify changes or new conditions that may affect site integrity, and to determine the need, if any, for maintenance or follow-up inspections and monitoring.

2.0 Inspection Results

Features and photo locations (PL's) mentioned in this report are shown on the attached drawing. All site surveillance features were photographed during this inspection to document site conditions.

2.1 Site Access

The access road that leads to the site from Foster Drive and the grade over the railroad tracks is in good condition and provides ample clearance.

2.2 Site Perimeter and Security Fence

The security fence is in fair condition. Although the fence continues to function as designed, most of the chain link fabric is showing signs of heavy rusting and corrosion (PL-1 and PL-2) due to the humid climate of the region. The chain link fence is now approximately 16 years old. The fence may remain serviceable for another 5 years or more. Once the integrity of the fence is no longer acceptable, the entire security fence (i.e., posts, fabric, top railing, security wire, hardware, etc.) may require replacement. Future inspections should closely monitor the condition of the security fence to determine the optimal time for replacement.

Barbed wire is attached to angle brackets along the top of the entire security fence. Inspectors noted that one of the three strands of barbed wire near perimeter sign P15 had rusted through and broken (PL-3). Generally, the condition of the barbed wire is poor. Inspectors observed severe rusting of the barbed wire at many locations. Apparently, the life expectancy of the barbed wire may be shorter than that of the chain link fabric. Additional breaks in the barbed wire are expected and inspectors should carry fence repair tools and extra wire to repair breaks found during future inspections. The program should consider replacing the barbed wire in the near future, perhaps before other fence components are replaced.

During previous inspections, two bent steel fence posts were noted (near perimeter sign locations P9 and P14). Because the integrity of the posts has not been compromised, they do not need replacement.

Padlocks on the entrance and personnel gates are heavily rusted. Some locks are so corroded they no longer work. In 2002, inspectors and other workers visiting the site should be prepared to break rusted locks to gain access and should carry replacement locks.

Spraying vegetation along the base of the security fence with herbicide is an annual maintenance action at this site. However, there was no evidence (i.e., a strip of dead or dying vegetation along the base of the fence) to indicate that weeds along the base of the fence had been sprayed in 2001. The 2000 annual inspection specifically noted the need for additional control of vegetation growing along the security fence near perimeter sign P6. At the time of the 2001 inspection, vegetation growth near perimeter sign P6 (i.e., the far north corner of the site) did not appear to have been recently sprayed, as a healthy community of various plants was observed to be thriving along the fence line (PL-4). LTSM Program management personnel should verify that the subcontractor actually sprayed the vegetation along the fence during 2001. If the vegetation was sprayed, the herbicide should be evaluated for effectiveness.

The entrance sign and all perimeter signs are in good condition. As noted during the 2000 site inspection, perimeter signs identified the waste material in the cell as "uranium mill tailings," which is an incorrect designation. Cell contents were derived from processing zirconium ore. Inspectors placed adhesive decals on each of the perimeter signs to correctly identify the waste as "Radioactive Materials" (PL-5).

2.3 Disposal Cell

The grassed disposal cell cover, essentially the area inside the security fence, is in excellent condition. The grass is very thick. Mowing once each growing season (July or August) appears sufficient to maintain a healthy turf.

Inspectors walked a series of traverses inside the security fence to inspect the disposal cell top, monitor wells, and grass cover. Inspectors observed no signs of settlement, erosion, or other modifying process that would indicate a threat to cell integrity.

In 2000, several additional patches of thistle (identified in the field as Canada thistle) were observed between perimeter signs P2 and P6 (PL-4 and PL-6). Thistle in these areas appears to be spreading and should be specifically targeted for control during the 2002 maintenance season.

The condition of the six monitor wells inside the fence is unchanged. Monitor wells MW-5 and MW-6, installed by DOE in 1994, are in excellent condition. The casings on the four AMAX wells (MW-1 through MW-4) are heavily rusted. Padlocks on most the monitor wells also are heavily rusted and should be replaced when the wells are sampled next in 2004.

2.4 Area Between Security Fence and Property Boundary

Grassed areas outside the security fence are in excellent condition. No erosion was observed.

Since 1997, annual mowing operations include one pass of a tractor and brushhog along the outside of the security fence on the southeast and southwest sides. This appears to be an effective and low-cost means to keep vegetation away from the security fence. Previously, trees and woody bushes intertwined with the fence have been a problem at the Parkersburg site. Previous control efforts (cutting, clearing, and spraying with herbicide) appear to have been effective, as this was not observed to be a pervasive problem at the time of the 2001 site inspection. Inspectors did observe other types of vegetation (e.g., vines, grasses, unidentified weeds) growing along the base of the security fence. Ongoing control will be necessary to prolong the service life of the fence and to maintain site appearance.

As first reported in 1999, an abundance of thistle was observed along the outside of the security fence between the perimeter signs P3 and P9. Again, this appears to be Canada thistle, although a positive identification has not been made. Because the thistle is out-competing the grasses and other plants, it should be controlled as a best management practice. Control efforts have nearly eliminated the thistle between perimeter signs P7 and P9 but the subcontractor should continue to assess these areas and treat infestations as necessary.

The drainage channel in the southwest corner of the site, lined with concrete and energy dissipation baffles in August 1996, is in excellent condition and functioning as designed. Headward migration of the nick point has been arrested. Vegetation in the disturbed area is well established.

Inspectors could not find boundary monument BM-4 during the 2000 or 2001 site inspections. This monument is located in the bottom of a drainage ditch that parallels the northern property

boundary, and is possibly covered by sediment or was destroyed during grass mowing operations. During the 2002 annual site inspection, inspectors should use Global Positioning System equipment or a metal detector to locate this monument. If the monument is missing, it should be replaced with a ground-level monument and marked with one or more ground-level reference monuments. All other boundary monuments were located and are in excellent condition.

2.5 Outlying Area

The Parkersburg site is located in a developed industrial area. Inspectors observed that no development or change in adjacent land use has occurred that threatens site integrity or access, or would result in more incidental traffic near the site.

3.0 Recommendations

1. The chain link fabric on the security fence is heavily rusted, as are the three strands of barbed wire on top of the security fence. The fabric may last another five years or more but the barbed wire is severely deteriorated at several locations and is expected to break (see page 2).

   Recommendation: During future inspections, inspectors should carry fencing tools and wire to repair breaks found during the inspection. Inspectors should also continue to monitor the overall condition of the fence to determine the optimal time for replacement.

2. Vegetation along the security fence does not appear to have been sprayed during the summer of 2001 (see page 2).

   Recommendation: LTSM Program management should confirm that vegetation was sprayed along the base of the security fence during 2001. If the weeds were sprayed, the herbicide should be evaluated.

3. Several patches of thistle between perimeter sign locations P2 and P6 (on the interior of the perimeter fence) appear to be spreading. Additional thistle is present outside the fence between perimeter signs P3 and P9 (see page 3).

   Recommendation: These patches of thistle should be specifically targeted for spraying during the 2002 maintenance season.

4. Boundary monument BM-4 could not be located. (see page 3).

   Recommendation: Inspectors should use GPS equipment or a metal detector to relocate this boundary monument. If the monument is missing, it should be replaced with a ground-level monument and one or more ground-level reference monuments should be installed.

5. Most of the padlocks on the entrance gate, personnel gates, and monitor wells are heavily rusted. These padlocks may be inoperable during future site visits (see page 3).

   Recommendation: Inspectors should be prepared to cut rusted padlocks and/or chain and replace with new equipment during future site visits.

4.0 Photographs

Photo Location	Azimuth	Description
PL-1	80	Heavy rust on chain link fabric.
PL-2	80	Heavy rust on chain link fabric.
PL-3	330	Broken strand of barbed wire on top of security fence.
PL-4	330	Vegetation along security fence near perimeter sign P6. Note patch of thistle in foreground.
PL-5	250	Inspector placing adhesive "Radioactive Materials" label on perimeter sign.
PL-6	330	Patch of thistle near perimeter sign P3.

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PL 1. Heavy rust on chain link fabric.

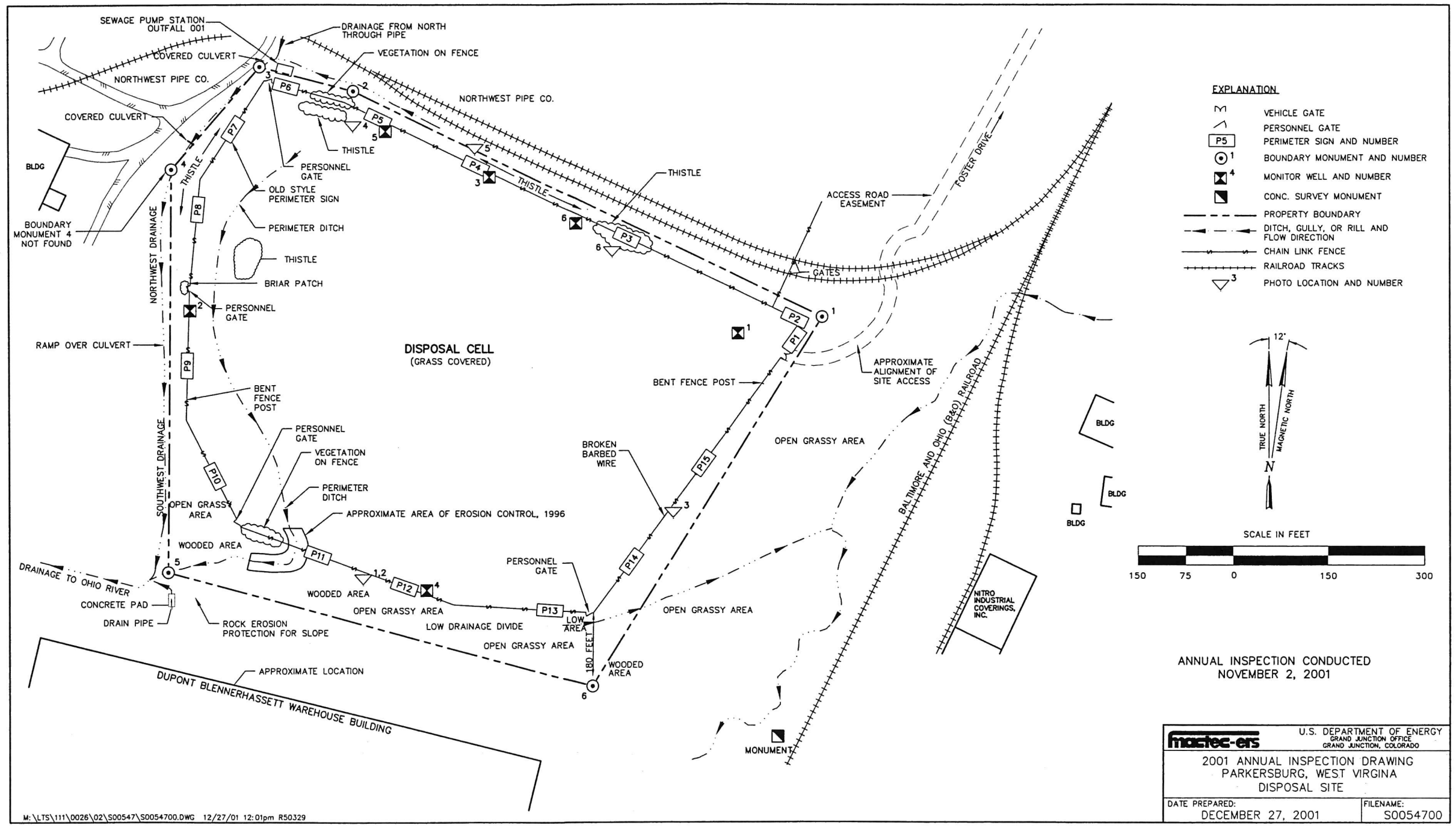
PL 2. Heavy rust on chain link fabric.

PL 3. Broken strand of barbed wire on top of security fence.

PL 4. Vegetation along security fence near perimeter sign P6. Note patch of thistle in foreground.

PL 6. Inspector placing adhesive "Radioactive Materials" label on perimeter sign.

PL 5. Patch of thistle near perimeter sign P3.



ANNUAL INSPECTION CONDUCTED
NOVEMBER 2, 2001

mactec-ers	U.S. DEPARTMENT OF ENERGY GRAND JUNCTION OFFICE GRAND JUNCTION, COLORADO
2001 ANNUAL INSPECTION DRAWING PARKERSBURG, WEST VIRGINIA DISPOSAL SITE	
DATE PREPARED: DECEMBER 27, 2001	FILENAME: S0054700

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